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NEW AMERICAN DIPTERA

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The flies described in the following pages are mostly from Central America but a few occurring in the Nearctic region and in South America have been included in order that the identification of Museum material in genera treated may be complete. In order to show the relationships of the new forms I have prepared keys to the species.

The types are in the American Museum of Natural History.

Stratiomyidæ

MEROSARGUS Loew

In the following key I have included only those species of which there are examples in the Museum collection. In addition to the species included there are six described from Mexico, references to which will be found in the Aldrich Catalogue.

TABLE OF SPECIES

- 1.—Posterior tibiæ black or brown on almost the whole length, at least on the anterior surface.....2.
- Posterior tibiæ yellowish on either the basal or apical third or with a very broad pale median band.....11.
- 2.—Mesonotum mostly black, brown, green or bluish.....3.
- Mesonotum rusty yellowish, sometimes with dark vittæ.....10.
- 3.—Tarsi blackish apically.....4.
- Tarsi wholly white.....*gowdeyi* Curran.
- 4.—All the femora entirely black.....*intensicus* Curran.
- Femora partly reddish or yellowish.....5.
- 5.—Posterior femora black with the apex very broadly reddish.. *fasciatus* Fabricius.
- Posterior femora with the apex only narrowly reddish or the base and apex broadly reddish.....6.
- 6.—Mesopleura with a large black spot.....7.
- Mesopleura wholly pale.....8.
- 7.—Anterior tarsi wholly black.....*anticus*, n. sp.
- Basal segments of the anterior tarsi yellowish.....*lutzi*, n. sp.
- 8.—Face wholly pale yellow.....*spatulatus* Williston.
- Face black or brown on lower half or more.....9.
- 9.—Front with an isolated whitish spot on either side.....*festiva* Williston.
- Front without isolated whitish spots.....*abana*, n. sp.

- 10.—Metapleura black. *rotundatus*, n. sp.
 Metapleura pale. 20.
- 11.—Front metallic green between the antennæ and the whitish fascia.
cingulatus Schiner.
 Front luteous or yellowish below. 12.
- 12.—Mesopleura partly or wholly black or green. 13.
 Mesopleura wholly pale. 15.
- 13.—Mesonotum metallic green. 14.
 Mesonotum mostly rusty yellow, the sides black in front.
hyalopterus Giglio-Tos.
- 14.—Hypopleura very broadly yellow behind. *stamineus* Fabricius.
 Hypopleura practically all dark, merely with a narrow, pale border. . . *elatus*, n. sp.
- 15.—Posterior tibiæ black, about the median third yellow. *ethelia*, n. sp.
 Posterior tibiæ at least half yellow. 16.
- 16.—Posterior tibiæ broadly black-haired basally. 17.
 Posterior tibiæ wholly yellow-haired on basal half. 18.
- 17.—Scutellar hair wholly black. *par*, n. sp.
 Scutellar hair mostly reddish yellow. *concinatus* Williston.
- 18.—Posterior tibiæ wholly yellow. 19.
 Posterior tibiæ black on apical half. *bequaerti* Curran.
- 19.—Front broadly yellow in the middle and behind the ocelli, black on the sides.
pallifrons, n. sp.
 Front metallic greenish above the transverse depression. . . *concinatus* Williston.
- 20.—Sides of the scutellum black at the base. *subinterruptus* Bellardi.
 Sides of the scutellum not black at the base; abdominal fasciæ entire.
abana, n. sp.

***Merosargus anticus*, new species**

Black, partly yellowish and reddish; front with two white spots below; anterior tarsi wholly black. Length, 5 to 7 mm.

MALE.—Head black, the face and lowest third of the front yellow, the front with a whitish spot on either side at the upper edge of the yellow ground; sides of the facial depression usually brown. Front with almost parallel sides except below, in the middle of the upper portion with a broad, strong longitudinal ridge that does not reach the ocelli but is represented above and below by a smooth area. Hair short, yellowish, partly black on the ocellar triangle. Proboscis and palpi yellow. Antennæ pale orange, the basal segments with black hair; third segment regular in outline; arista black, the base with short black hair.

Mesonotum, pectus, scutellum and a large spot on the mesopleura, black; humeri and pleura yellowish; the posterior calli and narrow border of the scutellum brownish yellow. Metanotum and metapleura black. Thorax with short yellowish hair, the metanotum and sides of the scutellum black-haired.

Coxæ, trochanters and femora reddish yellow, the posterior coxæ partly brown, the posterior femora black on the basal two-thirds; tibiæ black, the bases broadly reddish yellow above, the apex of the middle pair usually broadly reddish; tarsi black, the basal segment of the posterior pair yellow with brownish apex, the middle pair brownish yellow or pale brownish with lighter base. Hair short, yellowish; black on the anterior tibiæ and tarsi, and on the apical two or three segments of the

posterior four tarsi; brown on the basal half of the middle tibiae and most of the posterior surface of the posterior tibiae.

Wings smoky, the veins brown, yellow at the immediate base; third vein with two distinct anterior branches. Squamæ yellowish. Halteres yellowish, the knob brown behind.

Abdomen black, the second and third incisures usually broadly reddish, the first and third each with a small reddish triangle at either end, these fasciæ sometimes reduced to lateral triangles. Hair brown except on the sides. Venter reddish, the fifth and sixth sternites mostly brown; hair yellow on the basal four sternites, blackish on the apical one. Genitalia reddish yellow.

FEMALE.—Front slightly wider and with less pronounced median ridge. Ovipositor reddish yellow, the apical part brown; incisures with only the lateral triangles reddish yellow.

TYPES.—Holotype, male, allotype, female, two male paratypes, Moca Guatallon, Guatemala, 1000 m. (J. Bequaert).

***Merosargus lutzi*, new species**

Black, with rusty reddish-yellow markings; basal segments of the anterior tarsi reddish yellow. Length, 11 mm.

MALE.—Head black, the face and lowest fourth of the front reddish yellow, the front with a white spot on either side at the upper border of the yellow color; cheeks yellow, the lateral slopes of the facial depression brownish. Front with parallel sides on the upper half, slightly wider on the lower half, in the middle above the depression with a very broad, strong, rounded ridge extending to a little in front of the ocelli where it ceases abruptly. Hair very short and yellowish; black and erect on the black part of the front. Proboscis reddish yellow; palpi yellow. Antennæ pale orange, the two basal segments with black hair; third segment regular in outline; arista black, thickened and with short hairs on the basal seventh. Facial orbits very narrowly yellow pollinose.

Mesonotum, scutellum, metanotum and a large polished spot on the mesopleura, black; humeri and posterior calli rusty reddish; pleura, pectus and prothorax, reddish yellow, the anterior half of the neck very pale yellow, almost whitish. Hair yellow, paler on the pleura, the mesonotum with three brown pilose vittæ, the median one broad and entire, the lateral ones much abbreviated in front but extending over the posterior calli on to the corners of the scutellum; metanotum with black hair; apex of scutellum more or less yellowish, the free border brownish; upper edge of mesopleura creamy white.

Coxæ, trochanters, femora and tarsi reddish yellow, the apical two or three tarsal segments somewhat darkened. Posterior femora with the base and apex, and most of the upper surface, blackish; tibiae blackish, the broad apices of the anterior four and broad base of the front pair reddish. Hair yellow, black on the base, apex and upper surface of the posterior femora, on the broad base and posterior surface of the anterior tibiae, on the basal two-thirds of the middle tibiae, on the posterior tibiae except on the apical third of the anterior surface and on the apical two or three segments of the posterior tarsi.

Wings lightly cinereous, with luteous tinge; veins brown, reddish yellow at the immediate base of the wing. Squamæ reddish yellow. Halteres reddish yellow with the base of the knob black.

Abdomen slightly shining black, the first and second incisures very broadly reddish yellow, the third with an obscure, narrow reddish border and distinct reddish-yellow triangles at either side. Basal three sternites reddish, the apical two black; hair yellow on the basal four sternites, black on the apex of the fourth laterally and on the whole of the fifth. Genitalia reddish yellow.

TYPE.—Male, Tukeit, British Guiana, July 17, 1911 (F. E. Lutz).

***Merosargus abana*, new species**

Mesonotum reddish brown or brownish red; metanotum black; posterior legs black with the first tarsal segment reddish. Length, 6.5 to 8 mm.

FEMALE.—Head black, the lowest fourth of the front and upper third of the face yellowish, the yellow of the front bordered above by a whitish fascia; front very slightly widening anteriorly, coarsely granular, with a median shining vitta which is conspicuously striate. Hair yellowish, black on the black part of the front except at the vertex and immediately in front of the ocelli. Palpi and proboscis reddish yellow. Antennæ dark orange, the basal segments with black hair; third segment broadly excavated at the insertion of the arista; arista black, the base swollen and bearing a few short hairs.

Thorax rusty reddish-yellow, the mesonotum tinged with brown or even pale reddish-brown, with indications of two or four darker vittæ; in the pale form there is a brownish vitta toward either side behind the suture. Mesonotum with short, black hair, the anterior and lateral borders with brownish-red hair, pleural hair yellowish. Metanotum blackish, black haired. Scutellum with yellowish border.

Anterior legs reddish yellow, the coxæ yellowish, the base sometimes broadly brownish, the apical three tarsal segments black. Middle coxæ mostly brownish, the femora brownish red, their tibiæ black or brown on the basal half and brownish red on the apical half, their tarsi brown with the basal segment reddish. Posterior coxæ brown, the legs black, with the basal segment of the tarsi reddish. Hair yellowish, black on the basal half of the middle tibiæ, basal two-thirds of the posterior femora, on their tibiæ except in front, and on the apical three or four segments of all the tarsi.

Wings cinereous hyaline, slightly darkened on the apical half; third vein with two anterior branches. Squamæ grayish yellow. Halteres reddish yellow, the basal half of the knob black.

Basal two abdominal segments reddish, with a blackish fascia occupying a little more than the median third; third segment blackish, with the apical fifth reddish yellow; fourth and fifth segments blackish, the fourth with a yellowish triangle on each corner; ovipositor yellow, the cerci black. The fourth segment may bear a yellowish apical fascia; the entire sides of the abdomen are reddish yellow. Basal two sternites yellow, the apical three brown, with the sides reddish. Hair black, yellow on the sides and on the basal sternites.

TYPES.—Holotype, female, and paratype, female, Sa Emilia, Pochuta, 1000 m., February-March, 1931 (J. Bequaert).

***Merosargus rotundatus*, new species**

Rusty reddish, yellow and black; metapleura with a very large, roundish black spot. Length, 8 to 9 mm.

MALE.—Upper section of the front and the occiput black; the front with parallel sides, widened below the transverse depression and at the vertex, on either side with a narrow, punctate depression, the smooth section with weak, longitudinal striæ. Face,

cheeks, and lower section of the front yellow, the front with a large, subtriangular brown spot on either side below the weak, transverse ridge, the face transversely brown in the middle. Hair yellowish, extremely short and black on the front. Proboscis and palpi yellowish. Antennæ orange, the basal segments with yellow hair; third segment longer than wide, the sides almost rounded, the apex convex; arista brown, with short hairs on the swollen basal part.

Thorax rusty yellowish, the dorsum rusty reddish; the broad sides of the mesonotum except posteriorly, a large spot on the mesopleura above and a very large, roundish spot on the metapleura, shining blackish or brown. Hair on the mesonotum brown, on the scutellum and metanotum, black, on the pleura, yellow.

Legs reddish yellow and yellow; posterior tibiæ black, with reddish apex and very broadly reddish posteriorly; posterior femora brownish on the basal half of the anterior surface, the apical segment of all the tarsi brown. Hair yellow, black on the basal half of the anterior surface of the posterior femora, on the posterior tibiæ with the exception of the apical two-thirds of the posterior surface, and on the apical three segments of all the tarsi.

Wings rather strongly tinged with brown; basal branch of the third vein ending in the costa. Squamæ grayish yellow. Halteres reddish yellow, the basal half of the knob brown.

Abdomen orange, the second to fourth segments each with a large, oval or roundish shining black spot on either side, the fifth segment shining black with the basal sixth and the posterior and lateral margins reddish. Venter and genitalia reddish yellow. Hair black on the dorsum, yellow on the lateral margins, venter and genitalia.

FEMALE.—The black abdominal spots are larger, those on the first segment rectangular, on the second round, on the third transversely oval, on the fourth subrectangular, rounded outwardly, while the fifth segment has the apex narrowly reddish and the black color reaches the sides in almost its full width. Sixth segment reddish, the ovipositor brownish above, reddish below.

TYPES.—Holotype, male, Barro Colorado Island, Canal Zone, January 5, 1929; allotype, female, Barro Colorado Island, February 16, 1929 (Curran).

This species is related to *subinterruptus* Bellardi but is readily distinguished by the black spot on the metapleura, more elongate third antennal segment the black lateral vittæ on the mesonotum, etc. From *hyalopterus* Giglio-Tos it is distinguished by the black metapleural spot, long basal branch of the third vein, shape of the lateral black mesonotal vittæ and the abdominal markings.

***Merosargus elatus*, new species**

Metallic green and black, with violaceous reflections, the abdomen with yellowish fasciæ, metapleura wholly dark. Length, 6 to 10 mm.

MALE.—Head black, front metallic green, with violaceous reflections; upper half of face and lower section of front brownish yellow, the upper border of the lower section of the front with a narrowly interrupted white fascia. Front narrow, widening below, in the middle with an elongate, tubercular swelling or short, rounded ridge, the sides granular. Hair yellowish, black on the face. Proboscis and palpi yellow. Antennæ reddish yellow, the basal segments black-haired; third segment elliptical, longer than wide; arista black, with short black hairs on the swollen portion.

Mesonotum, scutellum, metanotum and metapleura metallic green, with violaceous reflections; pleura and pectus brownish black, the very broad upper border of the sternopleura and lower part or all of the pteropleura, yellowish, the incisures more or less bordered with brownish yellow; prothorax mostly yellowish. Hair yellowish, black on the posterior third of the metanotum.

Legs reddish yellow; posterior coxæ, posterior femora, except the base, apical half of the posterior tibiæ, the apical three segments of the anterior tarsi and apical four of the posterior tarsi, black or brown. Hair yellow, black on the blackish portions, white on the basal segment of the tarsi and on the posterior tibiæ.

Wings cinereous; veins brown; basal branch of the third vein elongate. Squamæ yellowish. Halteres yellow with the basal half of the knob brown.

First abdominal segment black, with almost the apical third yellow; second segment with the base and apex broadly yellow, the black band very broadly strongly narrowed in the middle, bisinuate anteriorly; third segment similarly marked, the fourth blackish, with the base and apex broadly reddish yellow, the fifth with a basal reddish fascia, sixth wholly dark. The blackish markings are all metallic and show greenish, bluish, and violaceous reflections. Hair black, yellow on the yellow fasciæ except along the broad middle line. Venter yellowish, the fifth sternite blackish on the apical two-thirds except at the tip, the sixth blackish except for a small lateral triangle, the hair concolorous with the integument. Genitalia reddish, the hair black.

FEMALE.—Face wholly brownish; median frontal swelling less developed; mesonotum with brownish hair in the middle anteriorly; pale abdominal fasciæ all narrow. Ovipositor brownish.

TYPES.—Holotype, male, France Field, Canal Zone, January 18, 1929; allotype, female, Corozal, Canal Zone, January 16, 1929. Paratypes: two males, Barro Colorado Island, Canal Zone, January 9 and February 18, 1929 (Curran); male, Teapa, Tabasco, Mexico, January (H. H. Smith, from Williston Collection).

This species is close to *stamineus* Fabricius but may be at once distinguished by the presence of the much stronger longitudinal frontal ridge, very much narrower white frontal fascia on the upper slope of the lower section of the front, absence of a whitish spot on the metapleura, more extensively black tarsi, etc.

***Merosargus ethelia*, new species**

Mesonotum mostly, and the scutellum, green; abdomen with black spots; posterior tibiæ black with a very broad median reddish band. Length, 5.5 mm.

MALE.—Head black; face and cheeks brownish yellow, the facial depression and a narrow fascia immediately above, blackish; lowest fourth of the front brownish yellow, with a broad white fascia above. Front with parallel sides on the upper half, slightly widening anteriorly, finely granular, a median shining vitta and the ocellar region bright green. Hair yellow, black on the middle of the face. Palpi and proboscis yellow. Antennæ dark orange, the basal segments with black hair; third segment longer than wide; arista black, with very short hairs on the base.

Mesonotum and scutellum metallic green, the former with the very broad anterior and lateral margins rusty reddish, the lateral margins with greenish reflections in some lights and becoming quite green posteriorly; metanotum green, the metapleura

violaceous; pleura shining rusty reddish above, becoming reddish yellow on the pectus. Hair yellowish, very pale on the pectus.

Legs reddish yellow, the coxæ and bases of the anterior four femora pale yellow; apical fourth of the posterior femora, basal and apical third of their tibiæ and the apical four segments of the posterior tarsi, black, the apices of the tarsal segments reddish; hair yellow, black on the black portions and on the apical segments of the anterior four tarsi.

Wings cinereous hyaline; first branch of the third vein united with the first vein on its apical third. Squamæ pale grayish-yellow. Halteres pale reddish-yellow.

Abdomen orange and black; the second to fourth segments each bear a very large, rather square black spot on either side while the first and fourth each bear a very large rectangular spot on either side, those on the first segment broadly separated, those on the fifth rather narrowly separated and narrowly connected along the posterior margin of the segment. All the blackish spots reach the lateral margins and all are separated from the anterior and posterior margins of the segments, except that those on the fifth segment extend to the posterior edge; the spots all have a purplish tinge. Venter and genitalia reddish yellow. Hair yellow, black on the black markings.

TYPE.—Male, Barro Colorado Island, Canal Zone, January 28, 1929 (Curran).

***Merosargus par*, new species**

Rusty reddish, the head, abdomen and legs with black markings. Length, 6.5 mm.

FEMALE.—Head yellow, the sides of the occiput, the frontal orbits on the upper two-thirds widening anteriorly, and the ocellar triangle, black, the black ocellar spot connected with the orbital stripe by a brown spot; hair yellowish. Front wide, slightly widened anteriorly, not granulated, the upper section with a very wide longitudinal median groove bounded laterally by a rounded ridge. Palpi, proboscis, and antennæ reddish yellow, the basal antennal segments with yellow hair; third segment a little longer than wide, convex apically; arista brown, the swollen portion yellowish and with a few short hairs.

Thorax rusty reddish yellow, the mesonotum and base of the scutellum with brownish tinge, and black hair; pleura with pale hair; metanotum yellowish brown, black-haired.

Legs reddish yellow, the base of the posterior femora broadly brownish red, the posterior tibiæ brown on almost the basal half; apical four segments of the anterior tarsi and two or three of the middle tarsi brown. Hair yellow, white on the posterior tarsi; base of the posterior femora, basal half of the posterior tibiæ and the dark segments of the anterior four tarsi, black-haired.

Wings cinereous hyaline, the veins yellowish brown; basal branch of the third vein very short, oblique, ending in the first vein. Squamæ yellowish. Halteres reddish yellow, the basal half of the knob brownish.

Abdomen rusty reddish, each segment with a broad, black fascia; that on the first segment basal and not reaching nearly to the lateral margin; that on the second segment lying mostly in front of the middle, produced medianly in front and extending over the lateral margins. The fascia on the third segment lies on the middle of the segment, is similarly produced in the middle, but reaches the lateral margins only obscurely; the bands on the fourth and fifth segments are wider, lie distinctly behind the middle, are more gradually produced anteriorly and do not reach the lateral

margins. Hair black, yellowish on the pale portions of the second and following segments. Venter reddish, the hair yellowish, black on the apical half of the fifth sternite, whole of the sixth and on the ovipositor; ovipositor reddish, the cerci black.

TYPE.—Female, Moca Guatalon, Guatemala, 1000 m. (J. Bequaert).

***Merosargus pallifrons*, new species**

Rusty reddish-yellow, the head and abdomen with black markings; posterior tibiae wholly yellowish and with yellow hair. Length, 8.5 mm.

MALE.—Head yellow, the front somewhat darker; occiput black on the sides; front with a broad black stripe on either side extending from a little below the middle to opposite the anterior ocellus, where the lateral bands are connected by a brown spot to the black ocellar triangle; middle of the front gently convex, grooved in the middle above the transverse depression. Front narrowest at the middle, slightly widening above, the sides gently concave, widest immediately below the transverse groove, thence gently narrowing to the lower margin. Palpi and proboscis reddish yellow. Antennae reddish yellow, the basal segments with yellowish hair, the third segment wider than long, gently convex apically; arista brown, the base obscurely yellowish, the swollen part bearing a few short hairs.

Thorax yellowish, the mesonotum slightly darker. Hair yellow, the mesonotum with a broad median vitta and the lateral margins behind the suture black-haired. Metanotum brownish yellow, black-haired.

Legs reddish yellow, the apical three tarsal segments brownish and bearing black hair, the second segment of the anterior tarsi darkened and with black hair; hair on femora, tibiae and basal tarsal segments yellow.

Wings with luteous tinge, somewhat grayish on the apical half; basal branch of the third vein very short, almost transverse. Squamæ luteous, with brownish border. Halteres yellowish, the basal half of the knob brown.

Abdomen rusty reddish-yellow and blackish. First segment yellowish with a transverse brown spot on the median third of the basal half; second similar but the spot is narrower; third yellowish with a very broad brownish fascia extending over the middle but not reaching the lateral margins; fourth with a little more than the median third blackish; fifth and sixth segments wholly black. Hair black, rich yellow on the very broad apices of the second to fourth and very broad bases of the third to fifth segments. Venter yellow on the basal half, black apically, yellow haired on the first three sternites, broad border of the fourth and broad base of the fifth. Genitalia reddish yellow.

TYPE.—Male, Barro Colorado Island, Canal Zone, January 4, 1929 (Curran).

Lonchæidæ

LONCHÆA Fallen

A key to the described Central American species belonging to this genus is given below. Several species described from South America are not recognizable, as the most important characters by which they may be separated are not mentioned.

TABLE OF SPECIES

- 1.—Posterior tarsi wholly black or brownish. 4.
 Basal one or more tarsal segments of the posterior legs reddish yellow. 2.
- 2.—Wings cinereous hyaline, the veins largely yellowish. 3.
 Wings wholly yellowish. *luridipennis*, n. sp.
- 3.—Third antennal segment three times as long as wide. *trita*, n. sp.
 Third antennal segment not twice as long as wide (Nicaragua). . . *bakeri* Malloch.
- 4.—Wings wholly cinereous hyaline. 7.
 Wings with the apical half or more brown. 5.
- 5.—Wings wholly brownish. *fuscipennis*, n. sp.
 Wings cinereous or cinereous yellow basally, almost the apical half brown. . . 6.
- 6.—Scutellum with many hairs on the sides. *dimidiata*, n. sp.
 Scutellum bare except for the four bristles. *ceres*, n. sp.
- 7.—Front with broad, irregular, transverse wrinkles. *duida*, n. sp.
 Front without wrinkles. 8.
- 8.—Front of male twice as long as wide. 9.
 Front of male only one-half longer than wide (Barbados). . . *nigrocerulea* Malloch.
- 9.—Thorax metallic blue. *batesi*, n. sp.
 Thorax black with slight bluish tinge (Brazil). *major* Malloch.

***Lonchæa trita*, new species**

Tarsi yellowish with the apical three segments blackish; no hairs surrounding the stigmatal bristle; wings cinereous hyaline. Length, 3.5 mm.

FEMALE.—Head black, the face with cinereous pollen. Front rather dull black, the sides polished above, one-third longer than wide, narrowing anteriorly, sparsely short-haired. Palpi very broad, black. Antennæ longer than the face, the third segment three times as long as wide, broadly reddish below on the basal third; arista sparsely short pubescent, obscurely reddish basally.

Thorax shining black, the hair short; no hairs surrounding the stigmatal bristle. Scutellum bare except for a pair of marginal hairs before the apical bristles and a pair of hairs between them.

Legs dark brown, the basal two tarsal segments reddish yellow. Middle femora with a row of rather weak posteroventral bristles and a weaker row on the anterior surface; posterior femora without distinct bristles.

Wings cinereous hyaline, the base whitish, the veins yellow. Squamæ and fringe whitish. Halteres black.

Abdomen blackish, the sides very broadly metallic bluish. Basal segment of the ovipositor wider than long.

TYPE.—Female, Patilla Point, Canal Zone, January 15, 1929 (Curran).

***Lonchæa luridipennis*, new species**

Black; tarsi yellow basally, wings wholly yellowish; no hairs surrounding the stigmatal bristle; scutellum without hairs. Length, 4 mm.

FEMALE.—Front three-fourths as wide as long, slightly narrowed above, shining black, sparsely haired in the middle; lunule hidden. Face with cinereous pollen. Cheeks with four or five bristles in addition to the coarse hair. Palpi black, very

broad. Antennæ black, not as long as the face; third segment not twice as long as wide; arista evidently bare, broadly yellowish basally.

Thorax shining black; mesonotum with short, appressed bristly hair; mesopleura with bristles only; no hairs surrounding the stigmatal bristle; scutellum bare except for the usual four bristles.

Legs blackish, the basal two tarsal segments reddish yellow. Anterior femora with numerous bristles behind; middle femora with a row of anterior bristles and a weaker row behind.

Wings wholly yellowish, the veins yellow. Squamæ and fringe yellow. Halteres black.

Abdomen shining black, with black hair.

TYPE.—Female, Mt. Duida, Venezuela, November 4, 1928 (C. H. H. Tate), No. 99.

The specimen is somewhat moldy but it is so distinctive that I have no hesitation in describing it.

***Lonchæa duida*, new species**

Shining black, the sides of the abdomen rather bluish; legs wholly black; squamæ grayish, with brown border and fringe. Length, about 4 mm.

FEMALE.—Face with cinereous, the occiput and vertex with thin brownish pollen. Front rather shining, the usual polished areas not clearly defined, the anterior three-fifths with irregular, broad transverse grooves, the hair abundant and erect; lunule haired. Cheeks without bristles. Palpi blackish, very broad. Antennæ black, shorter than the face, the third segment less than twice as long as wide; arista black, bare, the immediate base thickened.

Thorax shining black, the dorsum very thinly brownish pollinose; hair moderately long; scutellum wholly without hairs; no hairs surrounding the stigmatal bristle.

Legs blackish; middle femora with row of anterior and posterior bristles toward the lower edge.

Wings cinereous hyaline; base of wing not yellow, the veins mostly reddish yellow. Squamæ grayish, with brown border and fringe. Halteres black.

Abdomen shining black, the sides broadly with green or blue reflections; sternites black. Hair black.

TYPE.—Female, Mt. Duida, Venezuela, January 16, 1929 (C. H. H. Tate), No. 518.

***Lonchæa batesi*, new species**

Legs wholly black; squamæ white, the cilia at the outer side very long and black; abdomen blue with a very broad median bronze vitta. Length, 4.5 to 5 mm.

MALE.—Head black; face cinereous pollinose; sides of front blue above. Front almost twice as long as wide; frontal lunule with strong, stout setæ; cheeks with several bristly hairs. Palpi broad, black. Antennæ brown, longer than the face, the third segment four times as long as wide; arista plumose, yellow basally.

Thorax blue, the mesonotum very thinly brownish pollinose on the disc; hair wholly black. Hair abundant, coarse on the mesopleura; no hairs surrounding the stigmatal bristle; a pair of hairs between the apical scutellars.

Legs brown; middle femora with a row of long posteroventral bristles occupying practically the whole length; posterior femora with a row of short anteroventral bristles.

Wings cinereous hyaline, the base broadly pale yellow, the veins yellow on the basal half of the wing, some of them, including the costa, wholly yellowish. Squamæ white, with white fringe, the outer end with long black cilia. Halteres brown.

Abdomen blue, about the median third of the dorsum bronzed, the sternites brown. Hair black.

FEMALE.—Front wider, five-eighths as wide as long. Ovipositor much narrower than the front, yellowish apically.

TYPES.—Holotype, male, and allotype, female, Escuintla, Guatemala, 1100 ft. (Marston Bates), reared from mangos, *Mangifera indica*, in association with *Anastrepha ludens* Loew. Paratypes: male, Escuintla, May 10, 1931; two males and one female, Antigua, Guatemala, March 24, 25, 1931 (Bates), reared from seedpods of *Inga* species bought in Antigua market, associated with *Anastrepha* species.

This species traces to *vaginalis* Fallen in Malloch's key (Proc. U. S. N. M., LXV, Art. 12, pp. 3-5) but differs in color and the presence of black cilia on the squamæ. It is more closely related to *major* Malloch but the blue color separates it. From *nigrocoerulea* Malloch it is distinguished by its longer front.

***Lonchæa dimidiata*, new species**

Wings brown on almost the apical half, pale basally; legs black; no hairs surrounding the stigmatal bristle. Length, 5.25 mm.

MALE.—Head black; face with cinereous pollen; front rather dull, the sides polished above, the hair sparse. Cheeks scarcely visible from lateral view. Palpi black, very broad. Antennæ blackish, the base of the third segment and very broad base of the arista reddish; third segment four times as long as wide; arista plumose.

Thorax shining greenish black, the dorsum very thinly brownish pollinose. Hair abundant, short and coarse, scutellum with the sides haired and a pair of hairs between the apical bristles; no hairs surrounding the stigmatal bristle.

Legs blackish; middle femora with row of bristles in front and behind; posterior femora with poorly defined bristles in front but with three strong anterodorsals near the apex.

Wings grayish, with the apical portion brown; the brown color is bordered on the inner edge by a line drawn from the apex of the first vein to the posterior end of the posterior cross-vein and also extends along the front border of the costal cell although it may be paler in this cell. Veins yellow on basal portion of wing. Squamæ and fringe white, the outer corner with long black cilia. Halteres brown.

Abdomen shining black, the disc thinly brown pollinose and rather dull. Sternites brownish. Hair and bristles black.

FEMALE.—Front three-fifths as wide as long; first segment of the ovipositor short and broad.

TYPES.—Holotype, male, Barro Colorado Island, Canal Zone, November 10, 1930 (H. F. Schwarz); allotype, female, Mt. Duida, Venezuela, March 6, 1929 (C. H. H. Tate), No. 866.

Lonchæa ceres, new species

Wings luteous and pale brown; no hairs surrounding the stigmal bristle; frontal lunule haired to lower level of antennæ; squamæ white. Length, 5.5 mm.

MALE.—Head greenish black, the occiput and upper third of the front black; face cinereous pollinose. Front two-fifths as wide as long, the sides diverging below and gently widening above; hair abundant and erect, moderately long. Cheeks with a strong bristle near the middle, the oral margin with two or three below the vibrissæ. Palpi black, very broad. Antennæ black, shorter than the face, the third segment only one-half longer than wide; arista short plumose, yellowish basally.

Thorax shining black, with short, erect hair. Scutellum bare except for the usual four bristles. No hairs surrounding the stigmal bristle.

Legs blackish or brown, the basal segment of the anterior tarsi yellowish, the first segment of the middle tarsi mostly reddish. Middle femora with row of bristles in front and behind; posterior femora without strong bristles.

Wings luteous on more than the basal half, the apex beyond a line drawn from the apex of the first vein to a point well before the posterior end of the posterior cross-vein, strongly brownish; base of the wings not strikingly yellowish, the veins yellow on the basal half. Squamæ yellow, with reddish yellow border, the fringe yellow. Halteres black.

Abdomen shining black, the dorsum of the basal two segments brownish. Sternites brownish, thinly pollinose, wide. Hair black, the bristles not strong.

TYPE.—Male, Corumba, Brazil, May (Williston Collection).

Lonchæa fuscipennis, new species

Wings grayish brown, paler behind; no hairs surrounding the stigmal bristle; legs blackish. Length, 5 mm.

MALE.—Head black, face with cinereous pollen, the cheeks and occiput very thinly gray pollinose. Front opaque black, the sides shining above, scarcely half as wide as long, narrowing anteriorly, with rather abundant and fairly long hair. Cheeks scarcely visible from lateral view. Palpi black, broad. Antennæ black, longer than the face, the third segment more than four times as long as wide; arista very broadly yellowish basally, pubescent.

Thorax shining black, the dorsum appearing brown from anterior view; hair fairly long and abundant. No hairs surrounding the stigmal bristle. Scutellum with numerous marginal hairs and a pair between the apical bristles.

Legs blackish; middle femora rather closely ciliate posteriorly toward the lower edge, with a row of poorly differentiated bristles in front; posterior femora without strong bristles.

Wings grayish brown, paler behind on the basal half. Squamæ grayish yellow, the border of the upper lobe brown, the fringe yellow with long black hairs on the outer portion. Halteres brown.

Abdomen brownish black with the sides and apex very broadly shining black. Venter brown, with brownish pollen. Hair black, no bristles.

TYPE.—Male, Barro Colorado Island, Canal Zone, February 13, 1929 (Curran).

Tachinidæ

BUCENTES Latreille

I use this name in place of *Siphona* Meigen as there is a great deal of doubt as to the proper application of *Siphona*. In his original diagnosis Meigen named *Stomoxys irritans* Fabricius as the type of his genus. *Stomoxys irritans* Fabricius is considered a synonym of *Hæmatobia stimulans* Meigen and if we accept the ruling that the naming of the type by Meigen fixes *stimulans* (*irritans* Fabricius, not Linnæus) as type of the genus, *Hæmatobia* must be replaced by *Siphona*. On the other hand Meigen mentions the geniculate proboscis which proves that he did not have *irritans* Fabricius before him, and if we take the view, which I believe to be logical, that the named genotype must possess the characters attributed to the genus, we can accept *Siphona* as applying to the present genus. However, I leave the question to be decided later and use *Bucentes* Latreille, as that leaves no doubt as to the species that should be included.

The genus *Phantasiosiphona* Townsend¹ appears to be the same as *Bucentes* and I doubt if his species, *tropica*, is distinct from *futilis* Wulp. The genus seems to be based on the length of the arisal segments and this character is certainly of not more than specific importance in this group. I present a key to the North American species.

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¹1915, 'Ins. Ins. Mens.' III, p. 93.

²I am unable to include *plusiæ* Coquillett, as the lengths of the arisal segments are not given.

³*Phantasiosiphona*. I doubt if this species is distinct from *futilis*, as there is practically nothing in the description to indicate real differences.

Bucentes ceres, new species

Readily distinguished from other American species by the presence of three incomplete brown vittæ on the mesonotum. Length, 4.5 to 5 mm.

FEMALE.—Face and cheeks yellow, white pollinose; frontal vitta reddish, somewhat darkened above; parafrontals and occiput blackish in ground color, the former and the posterior orbits yellow pollinose, the occiput with white pollen; six pairs of frontals, the upper pair reclinate and divergent; two pairs of orbitals; ocellars long. Front almost as wide as greatest width of eye, gently widening anteriorly. Occiput with whitish hair below the neck. Cheeks one-fourth as wide as eye-height, black-haired. Parafacials narrowing below. Apical section of the proboscis a little longer than the preceding section; palpi yellow, cylindrical. Antennæ black, the basal segments brown; third segment with almost parallel sides, rounded off apically below, the upper apex sharply rounded; arista thickened on the basal two-fifths, the penultimate segment about one-fourth as long as the apical segment.

Thorax black in ground color, cinereous pollinose, the mesonotum with three rather narrow, incomplete brown vittæ, the bristles and hairs mostly arising from brown spots; three pairs of postsutural dorsocentrals. Apex of the scutellum yellow, the basal corners brown, each hair and bristle arising from a brown spot; three pairs of strong marginals and usually a pair of bristly hairs between the apicals, the sides of the scutellum haired. Three sternopleurals.

Legs reddish, the tarsi, posterior four coxæ and the immediate base of the anterior pair black, the coxæ cinereous pollinose; posterior femora with a large brown spot above before the apex.

Wings cinereous hyaline; veins at the base of the wing yellowish; third vein bristled on the base almost to the anterior cross-vein which is situated at the basal two-fifths of the discal cell; bend of fourth vein broadly rounded. Squamæ whitish, with yellowish tinge apically. Halteres reddish yellow.

Abdomen black in ground color, cinereous pollinose, the disc more or less brown, all the hairs and bristles arising from brown spots. First segment without median marginals, the second with one pair, the third and fourth each with a row. Under surface of the abdomen colored as above except that the inner borders of the first tergite are more or less broadly yellowish.

TYPES.—Holotype and three paratypes, all females, Finca Pintado, Antigua, Guatemala, parasitic on noctuid larva feeding on alfalfa (Marston Bates).

Bucentes intrudens, new species

Related to *cristata* Fabricius, but the abdomen is black in ground color and there are only three pairs of postsutural dorsocentral bristles. Length, 4.5 mm.

MALE.—Face, cheeks, and lower part of the occiput yellow in ground color, white pollinose; parafrontals and occiput black in ground color and with yellowish or brownish-yellow pollen; frontal vitta reddish, twice as wide as the parafrontals combined; seven pairs of frontals and two pairs of orbitals. Cheeks a little more than one-fourth as wide as the eye-height, the bristles black. Occiput with whitish hair below the neck. Proboscis reddish and reddish brown, the two apical sections of equal length; palpi reddish yellow, cylindrical. Basal antennal segments reddish, the third black, almost three times as long as wide, the lower apical corner very

broadly rounded, the upper apex rather sharply rounded; penultimate segment of the arista one-third as long as the apical segment.

Thorax black in ground color, cinereous pollinose, the mesonotum with three more or less fused brownish vittæ, but not conspicuously vittate. Scutellum with the tip obscurely yellowish; three pairs of marginal bristles and a pair of hairs between the apicals; sides of scutellum haired. Three pairs of postsutural dorsocentrals.

Legs reddish yellow, the tarsi black; posterior femora with a large apical brown spot above; posterior four coxæ reddish, with cinereous pollen.

Wings cinereous hyaline; third vein bristled from the base almost to the anterior cross-vein which is situated at the basal two-fifths of the discal cell; bend of fourth vein very broadly rounded. Squamæ whitish; halteres yellow.

Abdomen black in ground color, the tips and inner edges of the tergites yellow, the hairs and bristles each arising from a brown spot; first segment without median marginals, the second with one pair, the third and fourth each with a row. Genitalia brown.

FEMALE.—Proboscis brown, the apical section a little longer than the preceding section; frontal vitta reddish yellow; third antennal segment narrower and shorter; mesonotum almost uniformly cinereous, the disc slightly darkened. Middle and posterior coxæ mostly black in ground color. Brown spots surrounding the bristles larger and forming interrupted fasciæ on the third and fourth abdominal segments.

TYPES.—Holotype, male, and allotype, female, Castle Rock, Pa., April 7, 1908 (A. J. Weidt).

